RG STEEL
Wheeling, LLC

1134 Market Street | Wheeling, WV 26003

January 12, 2012

Ms. Estena McGhee
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103-2029

Re: Response to December 6, 2011 Comments
RFI Report – Follansbee Coke Plant

Dear Ms. McGhee:

Enclosed please find four copies of our responses to your comments issued December 6, 2011 related to the RFI Report for the Follansbee Coke Plant. The comment responses were prepared with assistance from our consultant, Civil & Environmental Consultants, Inc. (CEC). To facilitate your review, each of your comments is presented followed by our response.

Should you have any questions during your review of our responses, please do not hesitate to call me or Dave Olson at CEC (724-327-5200).

Sincerely,

Bud E. Smith

cc: Pat Smith
Dave Olson (CEC)
T. Fisher - WVDEP Charleston (3 copies)
ECMF 1.4.3.4.6

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RESPONSES TO DECEMBER 6, 2011 USEPA COMMENT LETTER
RCRA FACILITY INVESTIGATION WORK PLAN
RG STEELWHEELING, LLC (formerly known as SEVERSTAL WHEELING, INC.)
FACILITY
FOLLANSBEE, WEST VIRGINIA

Comment No. 12

The concentration term for groundwater must be corrected for all risks estimated using contaminants reported in groundwater. This includes potable use (residential) scenarios as well as vapor intrusion. As noted in the EPA comment, the correct concentration is developed from the center, or most contaminated portion of the plume.

Response Comment No. 12

The concentration term for groundwater used in risk calculations for all exposure scenarios will be revised to represent the most contaminated portion of the groundwater plume. This revision will be made in the final RFI report.

Comment No. 14

Modeling vapor intrusion into hypothetical future buildings is not sufficient to evaluate the potential for vapor impacts in the future. Because the potential for intrusion of vapors into a structure depends largely on building construction, foundation type, size, ventilation, etc., it is Region 3's position, as noted in the EPA Region 3 Vapor Intrusion Framework (2009), that the potential for vapor intrusion be evaluated using multiple lines of evidence as site buildings are completed in the future. As an alternative, Severstal could agree to an institutional control which requires that future buildings constructed on the site include an effective vapor barrier.

Response Comment No. 14

In order to avoid complicated vapor intrusion analysis/modeling, RG Steel Wheeling, LLC (RGSW) agrees to implement an institutional control as part of the final remedy which requires that future buildings in areas of the site where vapor-forming chemicals are present be constructed with an effective vapor barrier.

Comment No. 15

EPA agrees that additional discussion of the bioaccessibility issue is needed, and additional documentation supporting Severstal's position is required for EPA review. The prevalence of slag at soil and sediment sampling locations throughout the site as well as Mahan's Run must be established with sampling and/or boring logs as well as photographs. Photos could be obtained during the proposed additional work, if none are available at present. Documentation that the characteristics of slag on the Severstal site match that reported in the literature must be provided. The presence of miscellaneous fill material, which may not have the same characteristics as slag, should also be documented in individual samples. A review of reported bioaccessibilities from multiple literature sources for slag corresponding

to the slag on the WPS site must be performed. A single study is insufficient. Moreover, additional information is needed for the in vitro oral bioaccessibility study referenced in the Proctor, et al. paper. The brief discussion of the in vitro study in the Proctor article provides little documentation of details of the bioaccessibility experiment, including, but not limited to, whether an appropriate sample size was used, slag particle sizes, QA/QC procedures, and whether the study was peer reviewed or published in a recognized journal. Without additional site specific information, EPA will not approve the use of bioaccessibility factors that do not have Agency consensus support. For transparency, the baseline risk assessment must, at a minimum, present the default Agency consensus methodology (without bioaccessibility factors). If bioaccessibility factors are deemed acceptable to EPA, modified risks can be presented in addition to the default risks. Finally, note that the dermal bioaccessibility listed for vanadium on page 7-21 does not agree with the bioaccessibility reported in the Proctor paper. The Proctor experiment reported a 12% vanadium bioaccessibility, while the Severstal report lists a 0.12% bioaccessibility, a two order of magnitude error.

Response Comment No. 15

Responses to the specific issues/requests raised in the above comment are as follows:

- Given the age and weathered nature of the fill material, and the variety of physical characteristics of slag, it is very difficult to distinguish slag from other fill materials in collected soil samples. Therefore, documenting the amount of slag versus other fill materials at each sample location may not be practical.
- The source of the slag used as fill on-site is not known. Therefore, it will be impossible to document that the type(s) and characteristics of the on-site slag fill match those reported in the Proctor paper. However, it is reasonable to assume the slag came from historical iron/steelmaking operations in the region, which include blast furnace and basic oxygen furnace operations. In addition, the fact that the chemical fingerprint (elevated iron, manganese, and vanadium concentrations) of the on-site samples matches those reported in the proctor paper suggests the primary source of these metals is slag. Finally, it should be noted that, to account for the uncertainty in the type of slag present on-site, the higher (more conservative) of the bioaccessibility factors presented in the Proctor paper for blast furnace and basic oxygen furnace slag was used in the risk assessment.
- We will research other literature sources dealing with slag risk and bioaccessibility, although the Proctor study is the primary source of which we are we are aware.
- We will contact the authors of the Proctor paper and attempt to gain details of the in vitro study.
- A 12% vanadium bioaccessibility factor was used in the risk assessment calculations. The 0.12% listed on Page 7-21 was a typographical error.

Although not mentioned in your comment, it is important to not lose sight of the broader issue that slag has been used and continues to be used as fill at sites throughout the region and remediation of such a commonly used material is not practical.

Perhaps a conference call to discuss these issues is appropriate before proceeding to the next steps. We are available for a call at your convenience.

Comment No. 16

EPA notes that Severstal does not believe that 250 days/year is an appropriate exposure frequency for a construction worker. A reduced exposure frequency, based on the conservative judgment of Severstal, may be used for current construction workers. However, EPA's original comment stands, and a future construction worker must also be evaluated in the baseline risk assessment using the default exposure frequency listed in the EPA SSL Guidance.

Response Comment No. 16

An exposure frequency of 250 days/year will be used in risk calculations for future construction workers. This revision will be made in the final RFI report.

Comment No. 33, 35 and 38

See Comment No. 14.

Response Comment No. 33, 35, and 38

As described in the response to Comment No. 14 above, RGSW will implement an institutional control as part of the final remedy which requires that future buildings in areas of the site where vapor-forming chemicals are present be constructed with an effective vapor barrier.

Comment No. 37

As noted in the EPA comment, background concentrations can be established for metals only. It is likely that any elevated 'background' concentrations of PAHs are associated with some type of anthropomorphic activity, and are not indicative of pristine background conditions (free of site influence).

Response Comment No. 37

It is understood that PAHs detected in surface soil are likely associated with anthropomorphic activity; however, it is possible that they may not be associated with the disposal activities that have historically occurred in the hillside area. Based on our experience, low concentrations of PAHs in surface soil can be ubiquitous in heavily industrialized areas where burning of fossil fuels has been prevalent.

PHASE II WORK PLAN

Confirm that results for additional samples will be combined with historical data in the revised risk assessment in the final RFI report.

Response

The additional sampling results will be combined with the historical data in the revised risk assessment in the final RFI report.